TD99110658C2

Service Manual

Radio Cassette

RQ-A200

Stereo Radio Cassette Recorder

Colour

(S).....Silver Type

Areas

(EG).....Europe

(EJ).....F.R. Germany and Italy.

SPECIFICATIONS

SPECIFICATION

General

Power Requirement:	Battery; DC3V (Two R6/LR6,AA,UM-3 Batteries) AC;with optional Panasonic AC adaptor RP-AC31 (not available in some countries)
Power output:	Headphones;3mWx2 (RMS...max) Speaker;420mWx2 (RMS...max)
Input:	DC IN; 3V
Speaker:	∅36 x 2, 3.6cm,6Ω
Input jack:	ST MIC; 0.6mV (200~600Ω)
Output:	Headphone;(∅ 3.5,50 Ω)
Dimensions:	113.0 (W) x 86.6 (H) x 38.0mm
Weight:	194g

Radio Section:

Radio Frequency Range:	FM; 87.5 ~ 108.0MHz AM; 520 ~ 1610kHz
Intermediate Frequency:	FM; 10.7MHz AM; 459kHz
Sensitivity:	FM; 14dB µV/0.1 mW output (-3dB Limit, Sens) AM; 55dB /m/0.1mW output

Tape Deck Section:

Frequency Response:	Playback;40~16,000Hz (-6dB) (Normal) Recording;70~8000Hz
Recording System	AC Bias, Magnet erase
Tape Speed:	4.8cm/s
Track System:	4-track, 2-channel stereo
Wow & Flutter:	0.12% (WRMS)

Notes:

1.Weights and dimensions shown are approximate.

2.Design and specifications are subject to change without notice.

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⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public.
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

Panasonic®

1. LOCATION OF CONTROLS

2. DISASSEMBLY INSTRUCTIONS

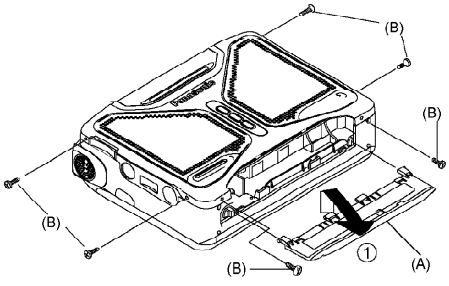


Fig. 1

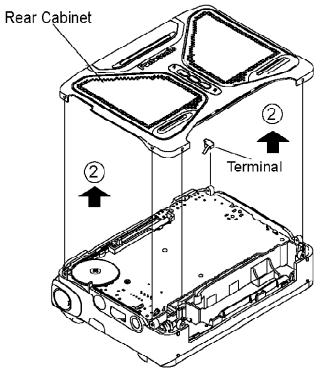


Fig .2

● **Removal of the battery cover and Rear Cabinet**

1 .Open the battery cover in the direction of arrow ①.
2 .Remove the battery cover (A) x 1.
3 .Remove the screws (B) x 6.
4 .Remove the rear cabinet in the direction of arrow ② . (Fig .2) .

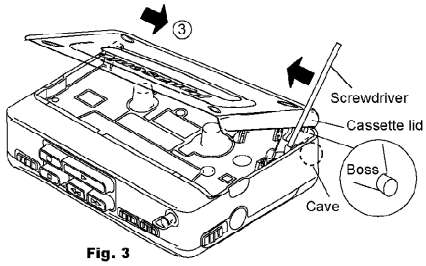


Fig. 3

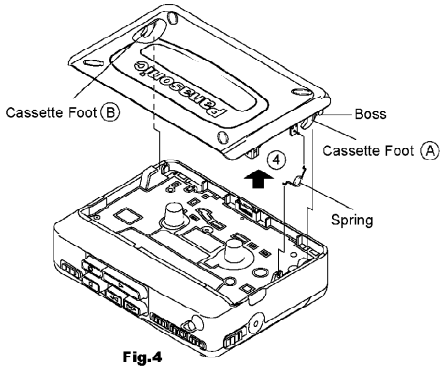


Fig.4

● **How to Removeal of the Cassette Lid (Fig.3 & Fig.4)**

Note: Be careful not to break cassette foots Ⓐ and Ⓑ when removing the cassette lid.

1.Open the cassette lid.
2.Strongly press two sides of the cassette lid, then it was bent a little.
3.with a (-) screwdriver as shown in Fig.3 and pull out the right-side of the cassette lid.
4.By the direction of ③,remove the cassette foot.
5.Remove the torque spring ④in the direction of arrow.

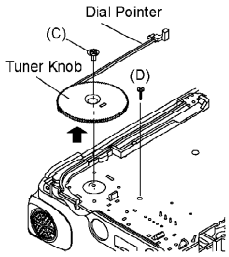


Fig.5

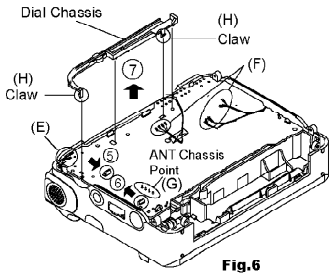


Fig.6

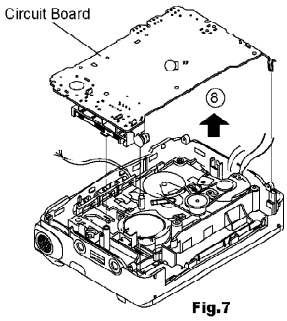


Fig.7

● **Removal of the Tuner Knob and Dial Pointer (Fig. 5)**

1.Remove the screw (C).
2.Remove the tuner knob and dial pointer.

● **Removal of Circuit Board and ANT Chassis (Fig.6 & Fig.7)**

1.Remove the screw (D) (See Fig.5)
2.Remove the solder (E).(F) from flexible P.C.B. in the direction of arrow ⑧. (See Fig.7)
3.Disconnect the solder (G).
4.Remove the ANT chassis in the direction of arrow ⑤, ⑥.

● **Removal the Dial Chassis (Fig.6)**

1.Remove the claws (H) x 2.
2.Remove the dial chassis in the direction of arrow ⑦.

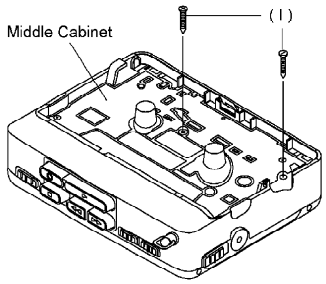


Fig.8

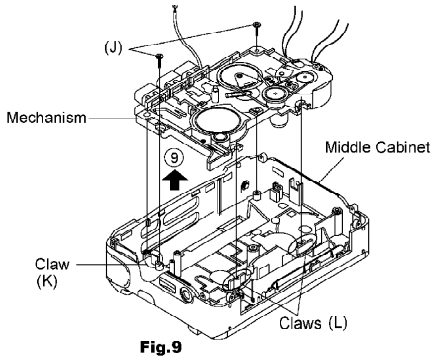
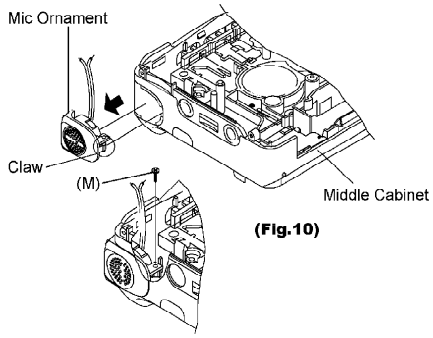


Fig.9

● **Removal of the Middle Cabinet and Mechanism (Fig.8 & Fig.9)**

1.Remove the CAB screws (I) x 2.
2.Remove the deck screws (J) x2.
3.Remove the claws (K).(L).
4.Remove the mechanism in the direction of arrow ⑨.



(Fig.10)

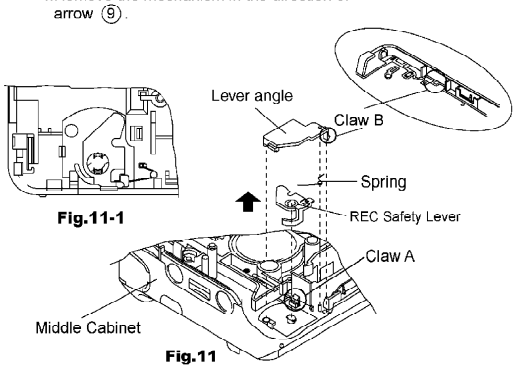


Fig.11-1

Fig.11

● **Removal of the MIC Ornament (Fig 10)**

1.Remove the screw (M) x1.
2.Remove the claw (N).
3.Remove the MIC Ornament in the direction of arrow.

● **Removal the REC Safety Lever (Fig.11)**

1.Remove the claw A and claw B.
2.Remove the lever angle and spring.
3.Remove the REC Safety Lever.

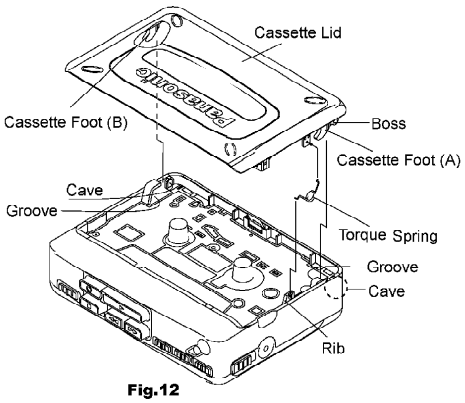


Fig.12

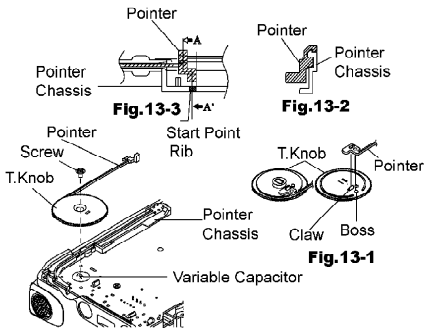


Fig.13

● **How to Replace the Cassette Lid (Fig.12)**

1.To plug the torque spring into the rib of the case body.
2.Enter the cassette foot (A) into the groove of the case body.
3.Enter the boss of the cassette foot into the cave.
4.Enter the cassette foot (B) into the gvoove of the case body.

● **How to Replace the T.Knob & Pointer (Fig.13)**

1.Turn Variable Capacitor clockwise to the end.
2.Install pointer to claw & boss of the T.Knob.(Fig.13-1)
3.Insert the center hole of T.Knob to variable capacitor and insert pointer to chassis.(Fig.13 & Fig.13-2)
4.Fasten the screw and drop a bit of bond arount it.

Note:

1.Turn pointer to the position of low frequency and let the pointer point to the rib of chassis.(Fig.13-3)

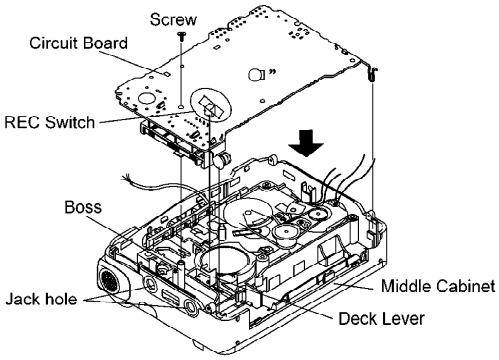


Fig. 14

● Notice for assembling the Circuit Board (Fig.14)
1.Press the button recording in advance.
2.Slant Main PWB and put jacks onto the jack hole.
3.Put the REC switch on the main PWB onto the deck lever.
4.Fit the main PWB onto boss of the middle cabinet.
5.Use screw to fix it onto the middle cabinet.
6.Release the REC button to the inital position.

■ MEASUREMENTS AND ADJUSTMENTS

● ADJUSTMENT POINT

Plessssase refer to the Printed Circuit Board and Wiring connection Diagram for test point locations.

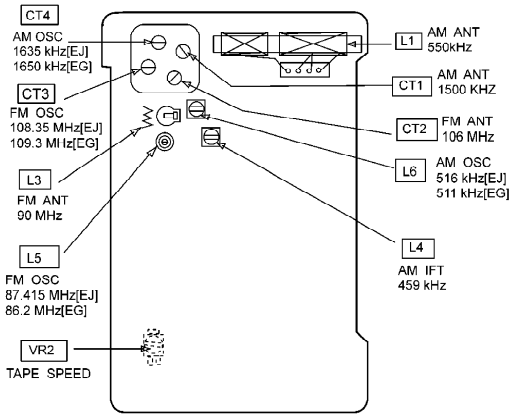


Fig.1

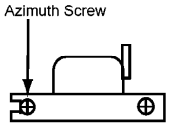


Fig.2

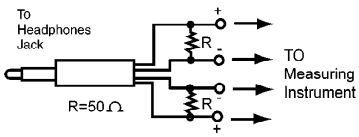


Fig.3

2.1. ADJUSTMENT INSTRUCTION

READ CAREFULLY BEFORE ATTEMPTING ADJUSTMENT	
1.Set volume control to maximum.	**4.Set power source voltage to DC 3V.**
2.Set Band/Function selector switch to Radio (AM/ FM) or Tape.	**5.Output of signal generator should be no hi Radio (AM/FM) or Tape.**
3.Set FM mode/Beat Proof switch to ST/I.	

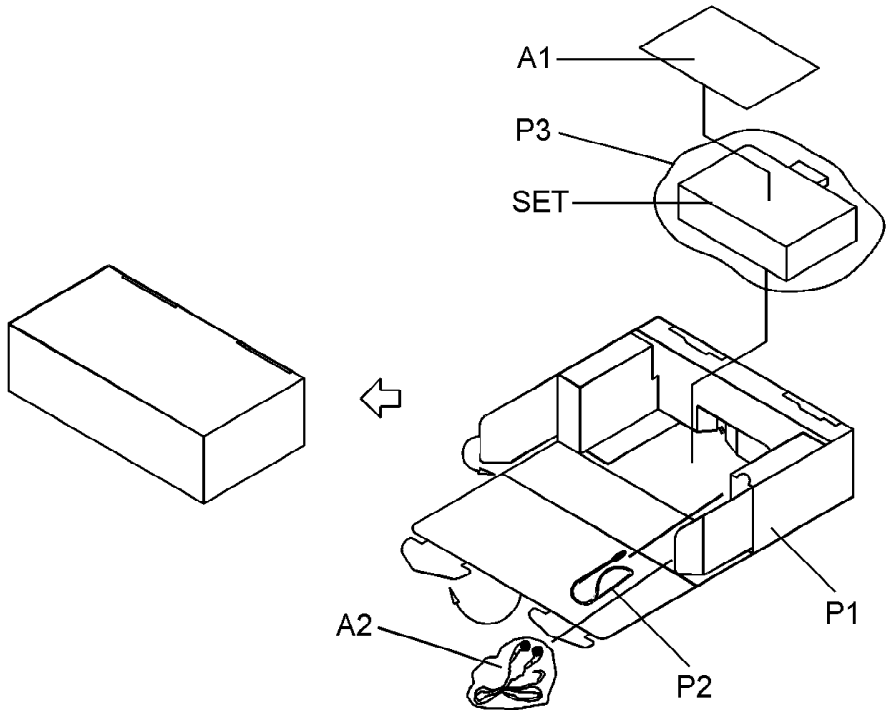
2.2. RADIO SECTION AM ADJUSTMENT

BAND	SIGNAL GENERATOR or CONNECTIONS	SWEEP GENERATOR- FREQUENCY	RADIO DIAL SETTING	INDICATOR (ELECTRONIC VOLT METER or SCOPE) (ELECTRONIC VOLT METER or SCOPE)	ADJUSTMENT	REMARI
AM	several turns of wire Fashion a loop of and radiate the signal into the loop antenna of the receiver	459kHz 30% Mod. at 400Hz	Point of non / interference (on/about 600kHz)	Headphones jack (50 Ω) (Fig.3)	L4 (AM IFT)	Adjust f maximu output.
AM-RF ALIGNMENT						
FM ALIGNMENT						
BAND	Signal generator or sweep generator (Connections)	Signal generator or sweep generator (Frequency)	Radio dial setting	Indicator (Electronic voltmeter or scope	Adjustment	Remark
FM-RF ALIGNMENT						
FM	Connect to test point “TP1”. Through FM dummy antenna. Negative side to test point “TP2”.	86.2MHz..[EG] / 87.415MHz.[EJ]	Variable capacitor fully closed	Headphones jack (50) (Fig.3)	L5 (FM OSC Coil)	(*2) Adju maximu output.
FM	“	109.3MHz.[EG] / 108.35MHz.[EJ]	Variable capacitor fully open.	“	CT3 (FM OSC Trimmer)	“
FM	“	90MHz	Tune to signal	“	L3 (FM ANT Coil)	“
FM	“	106MHz	“	“	CT2 (FM ANT Trimmer)	(*2) Adju maximu output. I steps (3
(*2) Three output responses will be present; proper tuning is the center frequency.						

AM	several turns of wire Fashion a loop of and radiate the signal into the loop antenna of the receiver	511 kHz...[EG] / 516 kHz...[EJ]	Tuning capacitor fully closed	Headphones jack (50 Ω) (Fig.3)	L6 (AM OSC Coil)	Adjust f maximu
AM	"	1650kHz...[EG] / 1635kHz...[EJ]	Tuning capacitor fully open.	"	CT4 (AM OSC Trim- mer)	"
AM	"	550kHz	Tune to signal	"	(*1) L1 (AM ANT Coil)	Adjust f maximu output. L1 by m coil bob along fe core.
AM	"	1500kHz	"	"	CT1(AM ANT Trimmer)	Adjust f maximu output. steps (2
(*1) Fix antenna coil with wax after completing alignment.						
FM ALIGNMENT						
BAND	Signal generator or sweep generator (Connections)	Signal generator or sweep generator (Frequency)	Radio dial setting	Indicator (Electronic voltmeter or scope	Adjustment	Remark
FM-RF ALIGNMENT						
FM	Connect to test point "TP1". Through FM dummy antenna. Negative side to test point "TP2".	86.2MHz..[EG] / 87.415MHz.[EJ]	Variable capacitor fully closed	Headphones jack (50) (Fig.3)	L5 (FM OSC Coil)	(*2) Adju maximu output.
FM	"	109.3MHz.[EG] / 108.35MHz.[EJ]	Variable capacitor fully open.	"	CT3 (FM OSC Trimmer)	"
FM	"	90MHz	Tune to signal	"	L3 (FM ANT Coil)	"
FM	"	106MHz	"	"	CT2 (FM ANT Trimmer)	(*2) Adju maximu output. steps (3
(*2) Three output responses will be present; proper tuning is the center frequency.						

ITEM	INPUT	MEASUREMENT POINT	ADJUSTMENT POINT	PROCEDURE
(A) Azimuth	QZZCFM (8kHz,-20dB)	Headphones Jack (50 Ω) (Fig.3)	Azimuth adjustment screw (Refer to Fig.2)	Adjust the azimuth adjustn screw during repeated forv and reverse playback to ob maximum head azimuth ali with both channels equal. screw-lock the adjustment place.
(B) Tape speed	QZZCWAT (3kHz,-10dB)	"	VR2 (Refer to Fig.1)	Playback the central part o tape and adjust VR2 so tha tape speed is as follows. 3 60Hz (forward & Reverse)

3. PACKAGING

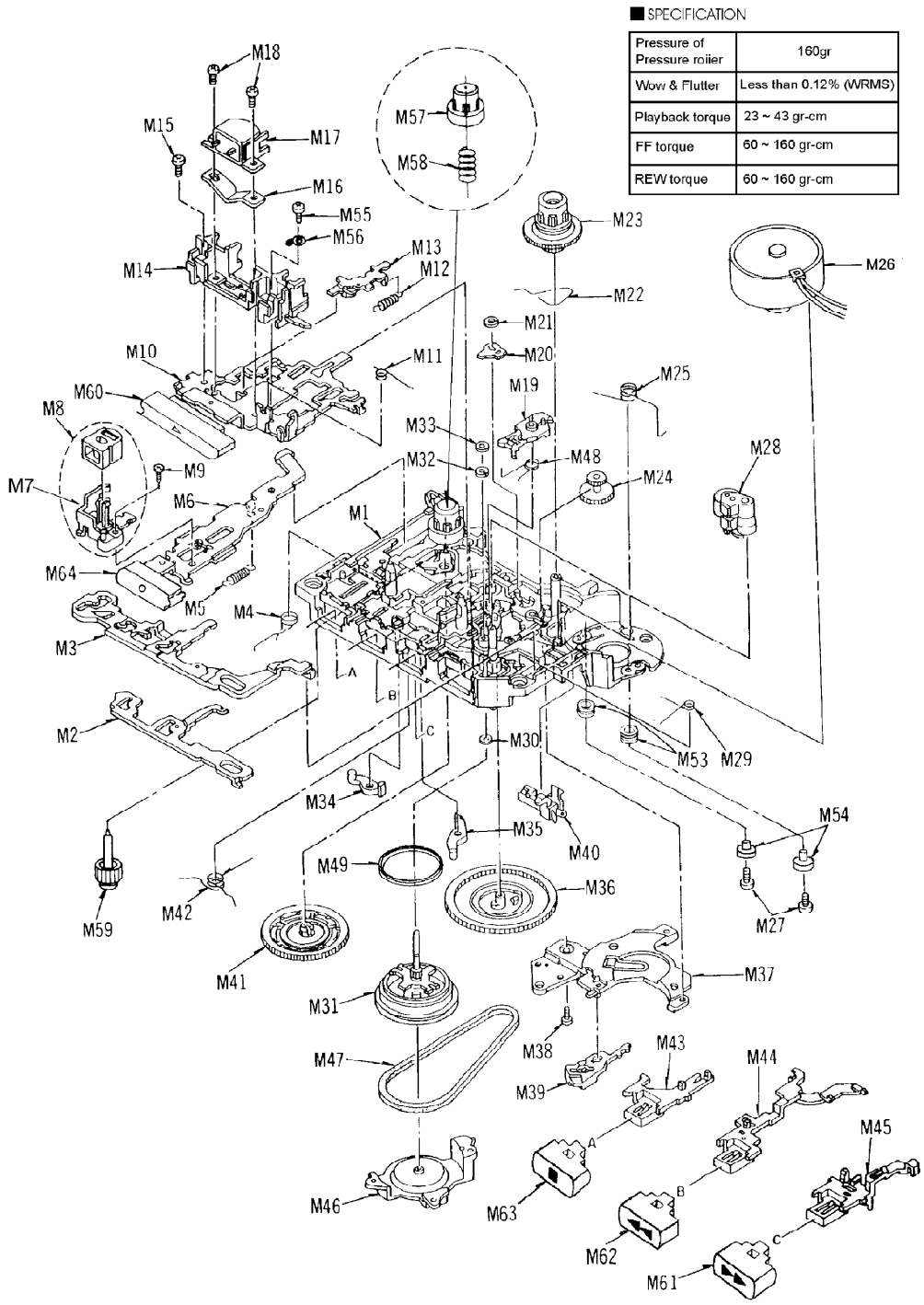


4. SCHEMATIC DIAGRAM NOTES

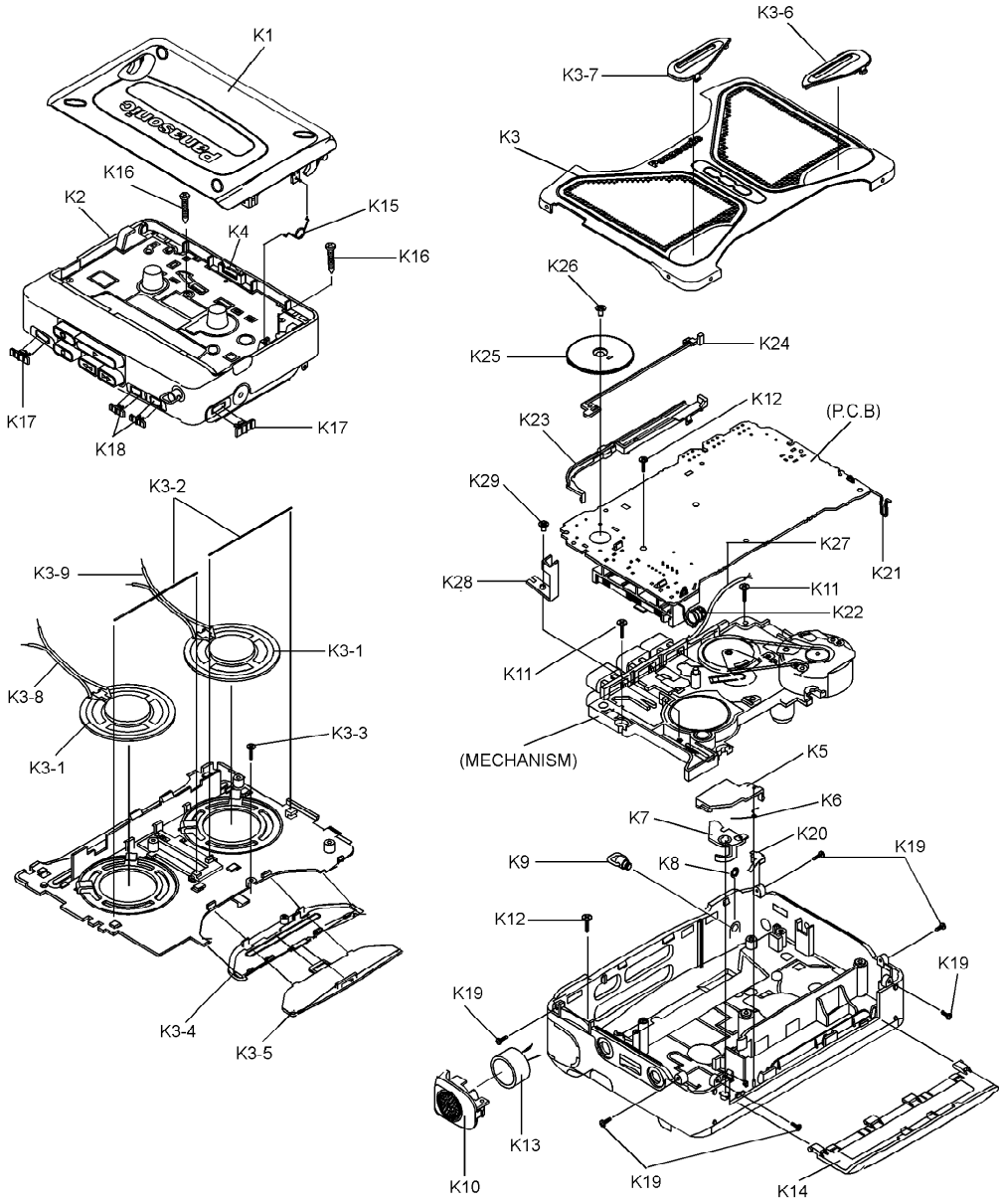
5. SCHEMATIC DIAGRAM

6. CIRCUIT BOARD AND WIRING CONNECTION DIAGRAM

7. MECHANISM PARTS LOCATION



8. CABINET PARTS LOCATION



9. Replacement Parts List

Notes:

1. (T) Indicates parts that are supplied TAMACO

2. (M) Indicates parts that are supplied MESA

3. The reference number SA represent the grease tool used for unit.

Ref. No.	Part No.	Part Name & Description	Remar
MECHANISMPARTS			
M1	RUL0001	Chassis Ass'y	(T)
M2	RFD453ZA	FR Plate	(T)
M3	RFD454ZA	Lock Plate	(T)
M4	RFS1005ZA	Stop Spring	(T)
M5	RFS1006ZA	REC Lever Spring	(T)
M6	RUM0001	REC Lever	(T)
M7	RUM0002	MG GUIDE	(T)
M8	RUE0001	Erase Head	(T)
M9	RFE619ZA	Screw	(T)
M10	RFY1100ZA	Head Panel	(T)
M11	RUK0001	P/R Spring	(T)
M12	RFS1007ZA	R/C Spring	(T)
M13	RFY1101ZA	R/C Plate	(T)
M14	RFE620ZA	Tape Guide	(T)
M15	RFE600ZA	Tapping Screw	(T)
M16	RFS980ZA	Head Spring Plate	(T)
M17	RFH64ZA	RP Head	(T)
M18	RFE599ZA	Screw	(T)
M19	RFY1093ZA	Auto Lover	(T)
M20	RFY1072ZA	A Push Arm	(T)
M21	RFE621ZA	P Washer Cut	(T)
M22	RFS1008ZA	Sensor Spring C	(T)
M23	RUF0001	Reel Ass'y	(T)
M24	RFG178ZA	Take UP Gear	(T)
M25	RFS1009ZA	HP Spring	(T)
M26	RVB0001	Motor Ass'y	(T)
M27	RFE628ZA	Screw	(T)
M28	RFR77ZA	Pinch Roller Ass'y	(T)
M29	RFS1010ZA	FR Plate Spring	(T)
M30	RFN256ZA	HL Washer	(T)
M31	RUC0001	Flywheel Ass'y	(T)
M32	RFX189ZA	Washer Cut	(T)
M33	RFN247ZA	HL Washer	(T)
M34	RFY1094ZA	R/C Lever(R)	(T)
M35	RFY1095ZA	R/C Lever(F)	(T)
M36	RFG179ZA	Cam Gear	(T)
M37	RFD455ZA	R/C Bracket	(T)
M38	RFX186ZA	Screw	(T)
M39	RFX190ZA	FF Stopper	(T)
M40	RFA114ZA	Motor,Switch	(T)
M41	RFG181ZA	RWD Gear	(T)
M42	RFS1011ZA	FR Spying	(T)
M43	RFY1096ZA	Stop Lever	(T)
M44	RFY1097ZA	RWD Lever	(T)
M45	RFY1098ZA	FF Lever	(T)
M46	RFF456ZA	FL Bracket	(T)
M47	RUA0001	Main Belt	(T)
M48	RFS1012ZA	M Control Spring	(T)
M49	RFB131ZA	Brake Belt	(T)
M53	RFI26ZA	M Lubber	(T)
M54	RFX95ZA	M Collor	(T)
M55	RFE603ZA	Screw	(T)
M56	RFE604ZA	LUG Plate	(T)

Ref. No.	Part No.	Part Name & Description	Remar
M57	RFJ103ZA	RWD Reel Hub	(T)
M58	RFS978ZA	B.T.Spring	(T)
M59	RFG175ZA	RWD Hub Gear	(T)
M60	RGUT0079-K	PLAY Button	(T)
M61	RGUT0080-K	FF Button	(T)
M62	RGUT0081-K	REW Button	(T)
M63	RGUT0082-K	STOP Button	(T)
M64	RGUT0083-K	REC Button	(T)
		CABINET PARTS	
K1	ZA01A200EG-S	CASSETTE ASS'Y	(T)
K2	RKMT0027B-S	FRONT CABINET	(T)
K3	ZA03A200EG-S	REAR CABINET ASS'Y	(T)
K3-1	RAS3P18-L	SPEAKER	(T)
K3-2	RMQT0040	SPEAKER BAR	(T)
K3-3	XTNR14+35CFZ	SCREW	(T)
K3-4	RMAT0039-S	BASE PLATE	(T)
K3-5	RKWT0040A-Q	DIAL PANEL	(T)
K3-6	RGKT0034-S	SP.CORNER PANEL(R)	(T)
K3-7	RGKT0035-S	SP.CORNER PANEL(L)	(T)
K3-8	RWJT1702060A	SP.WIRE	(T)
K3-9	RWJT1602060A	SP.WIRE	(T)
K4	RMCT0013	TAPE HOLDING SPRING	(T)
K5	RMVT0015-H	REC SAFETY LEVER/ANGLE	(T)
K6	RMBT0016	SAFETY LEVER SPRING	(T)
K7	RMRT0037-K	REC SAFETY LEVER	(T)
K8	XUC2	WASHER	(T)
K9	RKXT0002-S	HAND STRAP LINK	(T)
K10	RGKT0033-S	MIC CORNER PANEL	(T)
K11	RHD003TZA	SCREW	(T)
K12	XTNR14+35CFZ	SCREW	(T)
K13	ZA04A200	MIC PREPARED	(T)
K14	RKKT0020-S	BATTERY COVER	(T)
K15	RMET0012-1	TORQUE SPRING	(T)
K16	XTNR2+6CFZ	SCREW(CAB)	(T)
K17	RGVT0040-H	BAND KNOB	(T)
K18	RGVT0041-H	SLIDE KNOB	(T)
K19	RHQT0017-S	SCREW	(T)
K20	RMCT0017	GROUND TERMINAL	(T)
K21	RJCT30020	BATTERY TERMINAL(+)	(T)
K22	RJCT70019	BATTERY TERMINAL(-)	(T)
K23	RMAT0040-K	POINTER CH	(T)
K24	RGJT0005-R	POINTER	(T)
K25	RGWT0019-H	TUNER KNOB	(T)
K26	XSH17+3	SCREW	(T)
K27	RWLT06BI3H	HEAD WIRE	(T)
K28	RMAT0041	REC PLATE	(T)
K29	RHQT0012-S	R/P SCREW	(T)
		ACCESSORIES	
A1	RQTT0361-E	INSTRUCTION BOOK	(T)
A2	RFEV324P-KS	INNER PHONE	(T)
		PACKING MATERIALS	
P1[EG]	RPKT0307	DECORATION BOX	(T)
P1[EJ]	RPKT0308	DECORATION BOX	(T)
P2	RKHT0001-K	HANDLE STRAP	(T)

Ref. No.	Part No.	Part Name & Description	Remar
P3	RPFT0015	SET BAG	(T)
		JIG/TOOL	
SA1	QZZCWAT	TEST TAPE(TapeSpeedetc)	(M)
SA2	QZZCFM	TEST TAPE(AZIMUTH/FREQ)	(M)
MEC1	RAA3605-Z	DECK MECHANISM	(T)
PCB1 [EG]	RFKJQA200EG	P.C.B.Ass'y	(T)
PCB1 [EJ]	RFKJQA200EJ	P.C.B.Ass'y	(T)
		INTEGRATED CIRCUITS, TRANSISTORS AND DIODES	
IC1	CXA2500N	I.C.REC/PBPRE-AMP	(T)
IC2	TA2111FEL	I.C.TUNER	(T)
IC3	BA5208AFT	I.C.SPEAKER AMP	(T)
IC4	LC4533M	I.C.POWER AMP	(T)
IC5	BA5208AFT	I.C.SPEAKER AMP	(T)
IC6	AN6612SE2	I.C.MOTOR DRIVER	(T)
ICP1	ICPS10TN	I.C.PROCTECTOR	(T)
Q2,22	RVTDTC143TUX	Transistor	(T)
Q3,4,5	2SC4081RTX	Transistor	(T)
Q6,7,21	FMG8TX	Transistor	(T)
Q8,11	RVTDTC144TUX	Transistor	(T)
Q9	RVTDTC114TUX	Transistor	(T)
Q10,14, 16,18	2SB1295-6-TB	Transistor	(T)
Q18			
Q12	2SB1132RTX	Transistor	(T)
Q13,15	RVTDTC143ZUX	Transistor	(T)
Q19	RVTDTA144EUX	Transistor	(T)
Q20,23	RVTDTA124EUX	Transistor	(T)
Q24	2SK303V3TB	F.E.T.	(T)
D1,2,3	LNJ216C8ARAA	CHIPL.E.D.	(T)
D4	RVDDAN202UTX	Diode	(T)
D5,6,7	MA110TX	CHIPDIODE	(T)
D8,9	RB501V40TE17	Diode	(T)
		COILS AND TRANSFORMERS	
L1	REKT0025	BARANT.ASS'Y	(T)
L2	RLO8A002-T	ACBIASOSC.COIL	(T)
L3	RLO4Y15	OSC.COIL	(T)
L4	RLI2A016M-T1	I.F.T.(AM)	(T)
L5[EJ]	RLO4A002-Z	OSC.COIL(FM)	(T)
L5[EG]	RLO4Y19	OSC.COIL	(T)
L6	RLO2A010M-M	OSC.COIL	(T)
L7	RLL300040-Y	CHOCK COIL	(T)
L8	RLQZ010KM-T	CHOCK COIL(RF)	(T)
		VARIABLE CAPACITOR	
VC1~4	RCV4PCT6V1-T	VARIABLE CAP	(T)
		TRIMMER CAPACITOR	
VCT[EJ]	RCVCDB11H01L	TRIMMER	(T)
		VARIABLE RESISTORS	
VR1	EVUTV3B06A14	V.R.(Volume)	(T)
VR2	RRN3A01B13WA	V.R.Tape Speed	(T)
		CERAMIC FILTERS AND CRYSYAL	
CF1,2	RLFFETNL02AL	CERAMIC FILTER	(T)
CF3	RLFPFS459A3	CERAMIC FILTER	(T)
CF4	RLFDFT03AL	CERAMIC FILTER	(T)

Ref. No.	Part No.	Part Name & Description	Remar
		COMPONENT COMINATION	
Z1	RCRBMT004-H	BAND PASS FILTER	(T)
		SWITCHES	
SW1	RSS3B012-A	SW,TAPE/AM/FM	(T)
SW2	RSS2D013-Q	SW,REC/PLAY	(T)
SW3	RSS2B018-K	SW,PAUSE ON/OFF	(T)
SW4	RSS2B018-K	SW,BEAT-PROF/STEREO	(T)
SW5	RFA114ZA	SW,MOTOR	(T)
SW6	RSS3B012-A	SW,XBS/HP/SP	(T)
		JACKS	
JK1	RJJ35TR01-C	MIC Jack	(T)
JK2	RJJD3S5ZB-C	HEADPHONES JACK	(T)
JK3	RJJ43K08-H	DCIN Jack	(T)
		RESISTORS	
R2	ERJ3GEYJ182V	RESISTORS	(M)
R31,33,69,79	ERJ3GEYJ102V	RESISTORS	(M)
R4,5,6,7,40,45,47	ERJ3GEYJ471V	RESISTORS	(M)
50,72			
R8,9	ERJ3GEYJ561V	RESISTORS	(M)
R10	ERJ3GEYJ331V	RESISTORS	(M)
R11	ERJ3GEYJ330V	RESISTORS	(M)
R12	ERJ3GEYJ562V	RESISTORS	(M)
R13,14	ERJ3GEYJ271V	RESISTORS	(M)
R15,16	ERJ3GEYJ334V	RESISTORS	(M)
R17,18	ERJ3GEYJ393V	RESISTORS	(M)
R19,20,22,23	ERJ3GEYJ223V	RESISTORS	(M)
R21	ERJ3GEYJ1R2V	RESISTORS	(M)
R24	ERJ3GEYJ820V	RESISTORS	(M)
R25[EG]	ERJ3GEYJ682V	RESISTORS	(M)
R26,27	ERJ3GEYJ562V	RESISTORS	(M)
R28,29	ERJ3GEYJ104V	RESISTORS	(M)
R30	ERJ3GEYJ335V	RESISTORS	(M)
R32,34,70,71	ERJ3GEYJ151V	RESISTORS	(M)
R35,38	ERJ3GEYJ822V	RESISTORS	(M)
R36,56,81	ERJ3GEYJ222V	RESISTORS	(M)
R37	ERJ3GEYJ332V	RESISTORS	(M)
R39,41	ERJ3GEYJ683V	RESISTORS	(M)
R42	ERJ3GEYJ682V	RESISTORS	(M)
R43,44	ERJ3GEYJ152V	RESISTORS	(M)
R46	ERJ3GEYJ472V	RESISTORS	(M)
R48	ERJ3GEYJ391V	RESISTORS	(M)
R49,54	ERJ3GEYJ132V	RESISTORS	(M)
R51,53	ERJ3GEYJ271V	RESISTORS	(M)
R52	ERJ3GEYJ222V	RESISTORS	(M)
R55,59,78	ERJ3GEYJ473V	RESISTORS	(M)
R57,58,60,61	ERJ3GEYJ681V	RESISTORS	(M)
64,80			
R62,63	ERJ3GEYJ4R7V	RESISTORS	(M)
R64	ERJ3GEYJ681V	RESISTORS	(M)
R65	ERSL39JR70U	RESISTORS	(T)
R66	ERSL22J222U	RESISTORS	(T)
R67	ERJ3GEYJ2R2V	RESISTORS	(M)
R68	ERJ3GEYJ822V	RESISTORS	(M)
R73,74	ERJ3GEYJ333V	RESISTORS	(M)

Ref. No.	Part No.	Part Name & Description	Remar
R75	ERJ3GEYJ470V	RESISTORS	(M)
R76	ERJ3GEYJ6R8V	RESISTORS	(M)
R82	ERJ3GEYJ105V	RESISTORS	(M)
R83	ERJ3GEYJ680V	RESISTORS	(M)
		CHIPJUMPERS	
JR1~15	ERJ3GEY0R00V	CHIPJUMPERS	(M)
J1,2,3	ERJ3GEY0R00V	CHIPJUMPERS	(M)
		CAPACITORS	
C1,19	ECUV0J474KBV	CAPACITORS	(M)
C3	ECUV1H030CCV	CAPACITORS	(M)
C4,7,77,79	ECUV1H101KCV	CAPACITORS	(M)
C5,46,50,102,103	ECST0GY226R	CAPACITORS	(M)
C8	ECUV1H222MBV	CAPACITORS	(M)
C9	ECUV1C225ZFN	CAPACITORS	(T)
C10,52,63	ECUV0GA221SR	CAPACITORS	(M)
C11,12	ECUV1E103KBV	CAPACITOR	
C17,18 ,30,31	ECUV1H102KBV	CAPACITORS	(M)
C13,14, 69,70	ECUV1C683KBV	CAPACITORS	(M)
C15	ECUV1H180JCV	CAPACITORS	(M)
C16	ECUV1C104ZFN	CAPACITORS	(M)
C20,21,71	ECST0EY336R	CAPACITORS	(M)
C22	ECUV1C153KBV	CAPACITORS	(M)
C23,24,109,110	ECUV1E103KBV	CAPACITORS	(M)
C25,54,61,87,88	ECUV1C104ZFV	CAPACITORS	(M)
C26[EJ]	ECST0GY475R	CAPACITORS	(M)
C26[EG]	ECUV1C224ZFV	CAPACITORS	(M)
C27[EG]	ECUV1H020CCV	CAPACITORS	(M)
C28[EJ]	ECUV1H270JRN	CAPACITORS	(M)
C28[EG]	ECUV1H270JCV	CAPACITORS	(M)
C29,89,92,96	ECEA0GKS221I	CAPACITORS	(M)
C32	ECUV1H681KBV	CAPACITORS	(M)
C33,37,49,84	ECUVNC105ZFN	CAPACITORS	(M)
C34,35,44,45,67,68	ECUVNC105ZFN	CAPACITORS	(M)
C36,38,56,58	ECUVNC334ZFV	CAPACITORS	
C39	ECUV1H080DCV	CAPACITORS	(M)
C40,41	ECUV1H472KBV	CAPACITORS	(M)
C42	ECUV1C103KBV	CAPACITORS	(M)
C43,104,106	ECST0GY475R	CAPACITORS	(T)
C47	ECUV1H681KBV	CAPACITORS	(M)
C48,51	ECUV1H272KBV	CAPACITORS	(M)
C53,57	ECUV1C153KBV	CAPACITORS	(M)
C55,59	ECUV1E103KBV	CAPACITORS	(M)
C60,64	ECUV1C473KBV	CAPACITORS	(M)
C66,100	ECEA0GKS471I	CAPACITORS	(M)
C72,73,101	ECUV1H102KBV	CAPACITORS	(M)
C74,75	ECUV1H471KBV	CAPACITORS	(M)
C76,78	ECST0GY226R	CAPACITORS	(M)
C81,82,83,85	ECST1AY225R	CAPACITORS	(M)
C86,90,91,93,94	ECST0GY475R	CAPACITORS	(M)
C95	ECUV1C224ZFV	CAPACITORS	(M)
C97	ECUV1C224ZFV	CAPACITORS	(M)
C98,99	ECEV0JA331P	CAPACITORS	(M)
C105,107	ECST0GY106R	CAPACITORS	(M)

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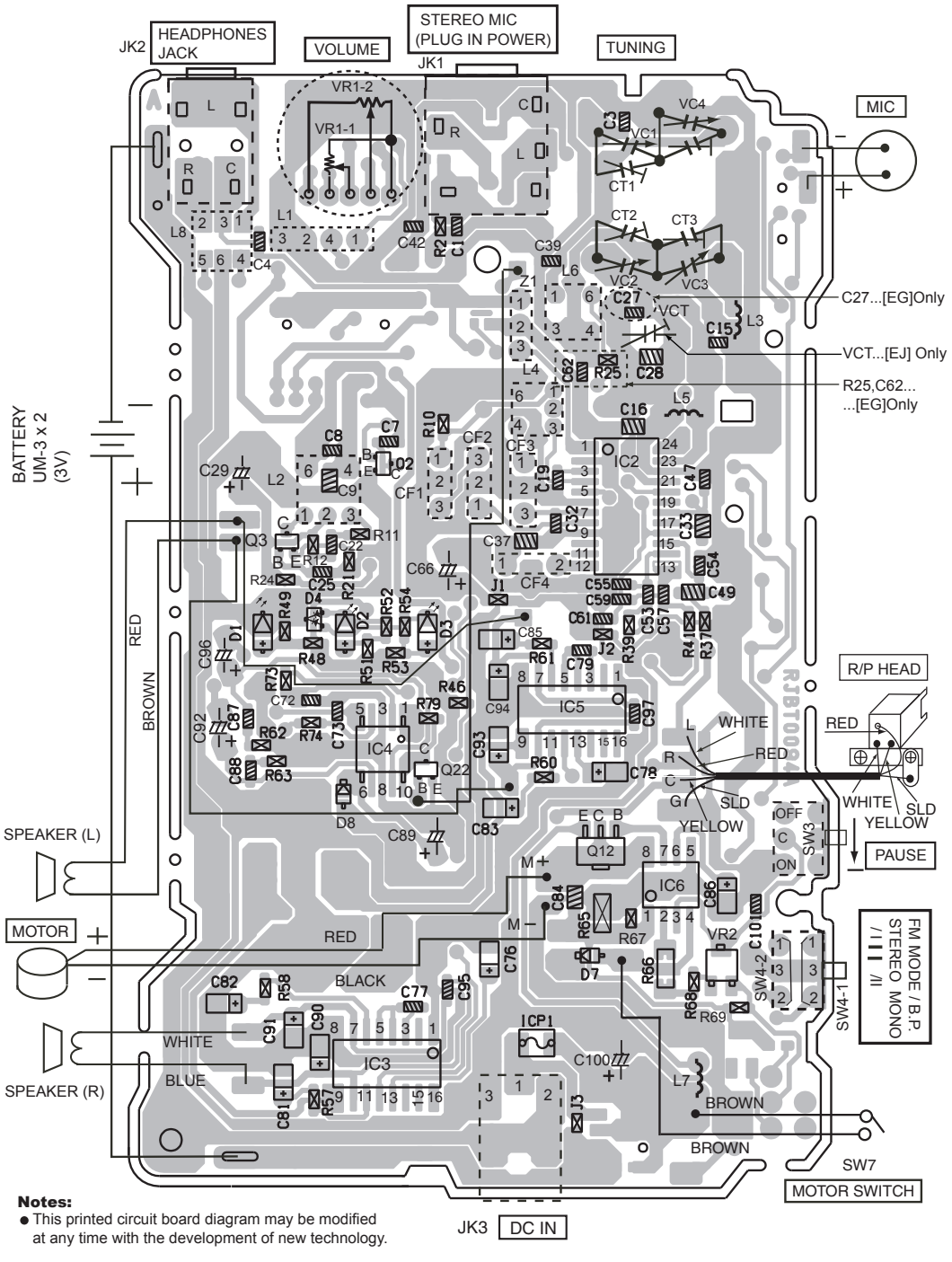
■ CIRCUIT BOARD AND WIRING CONNECTION DIAGRAM

A MAIN P.C.B (SIDE:A)



Notes:

- This printed circuit board diagram may be modified at any time with the development of new technology.

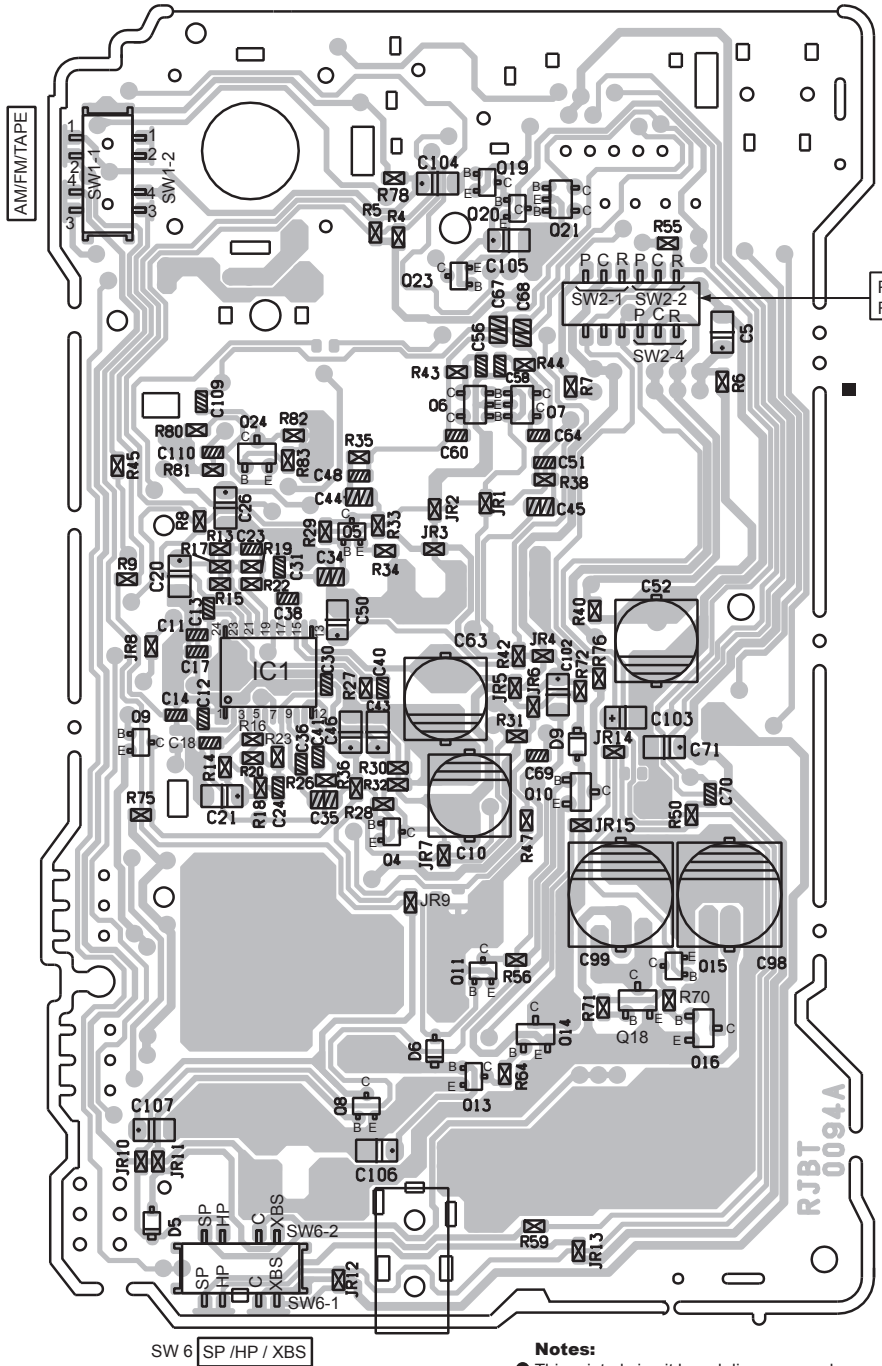
■ ELECTRONIC PART LOCATION

IC2	6G	C28	4G	R2	3E
IC3	11D	C29	5C	R10	5E
IC4	8D	C32	6F	R11	6D
IC5	8F	C33	6G	R12	6D
IC6	9G	C37	6F	R21	6D
ICP1	10F	C39	4F	R24	6C
Q2	5E	C42	3E	R25	5G
Q3	6C	C47	6G	R37	7G
Q12	9F	C49	7G	R39	7G
Q22	8E	C53	7G	R41	7G
D1	7C	C54	6G	R46	7E
D2	7D	C55	6G	R48	7D
D3	7E	C57	7G	R49	7C
D4	7D	C59	7G	R51	7D
D7	10F	C61	7G	R52	7E
D8	8D	C62	5F	R53	7E
L1	3D	C66	6E	R54	7E
L2	6D	C72	7D	R57	11D
L3	4H	C73	8D	R58	10C
L4	5F	C76	10E	R60	8F
L5	5G	C77	10E	R61	7F
L6	4F	C78	8G	R62	8C
L7	11G	C79	7F	R63	8C
L8	3C	C81	11C	R65	9F
VC		C82	10C	R66	10G
1~4	3G	C83	8F	R67	9G
VCT	4G	C84	9F	R68	10G
VR1	3D	C85	7F	R69	10H
VR2	10H	C86	9G	R73	7C
CF1	6E	C87	8C	R74	8D
CF2	6E	C88	8C	R79	8E
CF3	6F	C89	9E		
CF4	6F	C90	10D		
Z1	4F	C91	9C		
SW3	9H	C92	8C		
SW4	10H	C93	8F		
SW7	11H	C94	7F		
J1	2E	C95	10E		
J2	2C	C96	7C		
J3	12F	C97	8G		
C1	3E	C100	11G		
C2	3E	C101	9H		
C3	2G				
C4	4C				
C7	5E				
C8	5D				
C9	6D				
C15	4H				
C16	5G				
C19	6F				
C22	6D				
C25	6D				
C27	4G				

■ CIRCUIT BOARD AND WIRING CONNECTION DIAGRAM

A MAIN P.C.B (SIDE:B)

P.C.B. ASS'Y (RFKJQA200EJ)...[EJ]Only
(RFKJQA200EG)...[EG]Only



SW 6 SP /HP / XBS

ELECTRONIC PART LOCATION

IC1	7C	R27	7D	C24	8C
Q4	8D	R28	8D	C30	7C
Q5	6D	R29	6C	C31	6C
Q6	5E	R30	8D	C34	6C
Q7	5E	R31	7E	C35	8C
Q8	10D	R32	8D	C36	8C
Q9	7B	R33	6D	C38	6C
Q10	8F	R34	6D	C40	7D
Q11	9E	R35	5D	C41	8C
Q13	10E	R36	8D	C43	7D
Q14	10E	R38	5E	C44	6D
Q15	9G	R40	7F	C45	6E
Q16	10G	R42	7E	C46	7D
Q18	10F	R43	5E	C48	5D
Q19	3E	R44	5E	C50	7D
Q20	3E	R45	5B	C51	5E
Q21	3F	R47	8E	C52	7F
Q23	4E	R50	8G	C56	5E
Q24	5C	R56	9E	C58	5E
D5	11B	R59	11E	C60	5E
D6	10D	R64	10E	C63	7E
D9	8F	R70	10G	C64	5E
SW1	3B	R71	10F	C67	4E
SW2	4F	R72	7F	C68	4E
SW6	12C	R75	8B	C69	8E
R4	4D	R76	7F	C70	8G
R5	4D	R78	3D	C71	8G
R6	5G	R80	5B	C98	9G
R7	5F	R81	5B	C99	9F
R8	6B	R82	5C	C102	7F
R9	6B	R83	5C	C103	7F
R13	6C	C5	4G	C104	3E
R14	8C	C10	8E	C105	4E
R15	6C	C11	7B	C106	11E
R16	8C	C12	7B	C107	10B
R17	6C	C13	6B	C109	5B
R18	8C	C14	7B	C110	5B
R19	6C	C17	7B		
R20	8C	C18	8B		
R22	6C	C20	6B		
R23	8C	C21	8C		
R26	8C	C23	6C		

Notes:

- This printed circuit board diagram may be modified at any time with the development of new technology.

■ SCHEMATIC DIAGRAM

Notes:

1.SW1-1,1-2:Function/Band selector switch in "TAPE" position.
(1...TAPE, 2...FM, 3...AM).

2.SW2-1,2-2,2-4:Record/Playback select switch in "Playback" position.

3.SW3: PAUSE ON/OFF switch in "ON" position.

4.SW4-1: BEAT PROF switch in "I" position.
(1...I, 2...II.)

5.SW4-2: FM MODE switch in "ST" position.
(1...ST, 2...MONO)

6.SW6-1,6-2: XBS/HP/SP select switch in "Speaker" position.
(1...XBS, 2...Headphone, 3...Speaker)

7.SW7; Motor switch in "OFF" position.

8.VR1: Volume control VR.

9.VR2: Tape speed adjustment VR.

10.Battery current:
Volume minimum output (Radio)....75 mA.
Volume Maximum output (Radio)...300 mA.
Volume minimum output (Tape).....130 mA.
Volume Maximum output (tape).....600 mA.
(Radio,74dB 30% Modulation
Tape,315Hz 0dB tape playback)

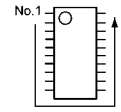
11.The mark (■) showns test point e.g. 1 = test point 1.

12.DC voltage measurement are taken with electronics voltmeter from negative terminal of battery.
( )...AM, < >...FM, [ ]...FM & AM, □ ...Record.
No mark...Playback.

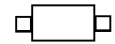
13. → : +B Voltage Line.
⇨ : Record Signal Line
⇨ : Playback Signal.
➡ : FM Signal.
➡ : Playback and Radio.

14.**This schematic diagram may be modified at any time with the development of new technology.**

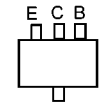
■ TYPE ILLUSTRATION OF IC, TRANSISTOR AND DIODE



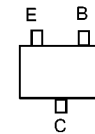
CXA2500N
TA2111FEL
AN6612SE2
BA5208AFT
LA4533M



ICPS10TN



2SB1132RTX



RVTDTC143TUX
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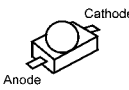
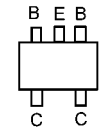
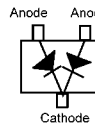
RVTDTC144TUX
RVTDTC114TUX
2SB1295-6-TB
RVTDTC143ZUX
RVTDTA144EUX



LNJ216C8ARAA



FMG8TX



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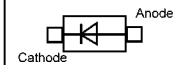
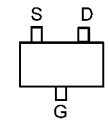
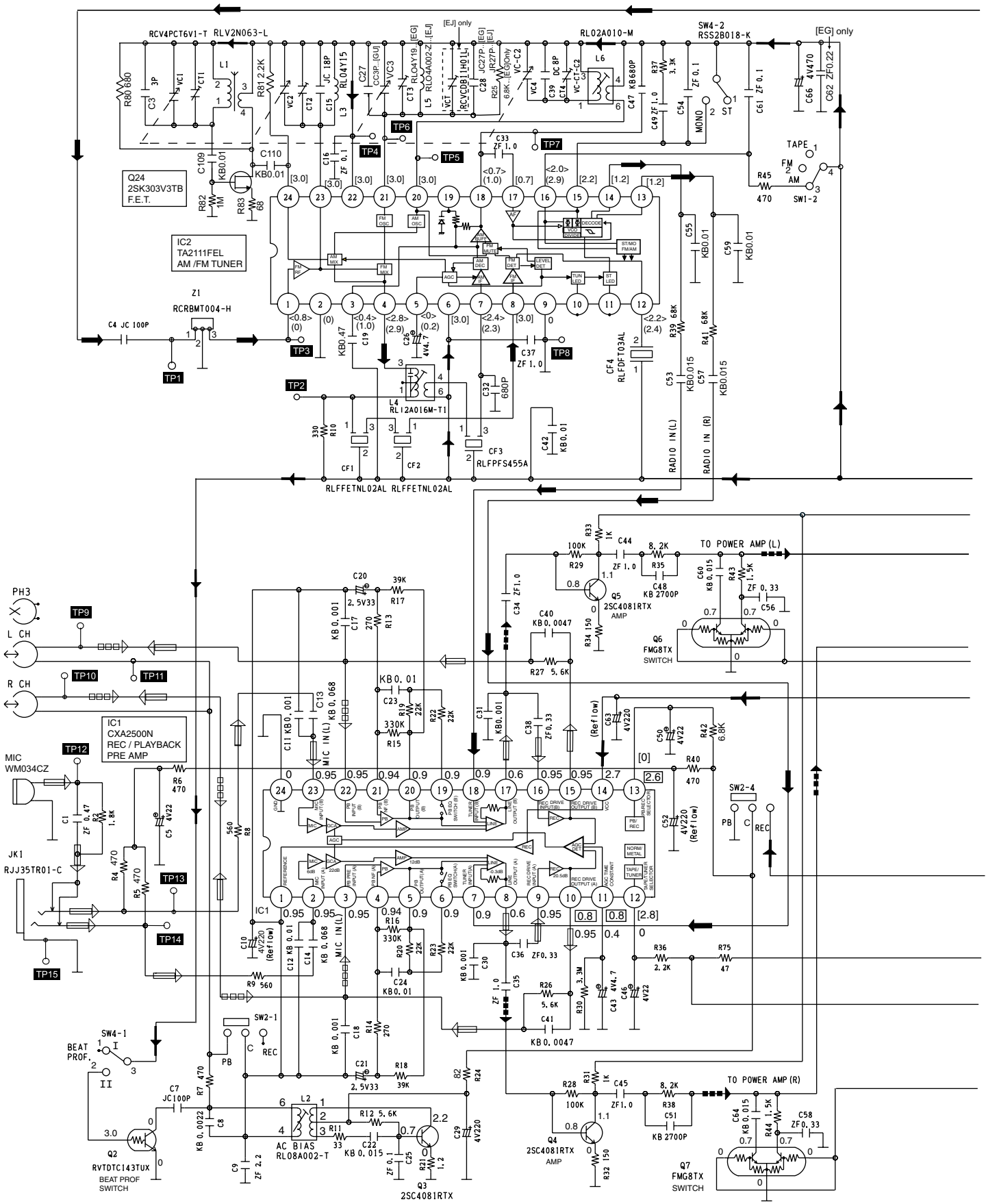


MA110TX
RB501V40TE17

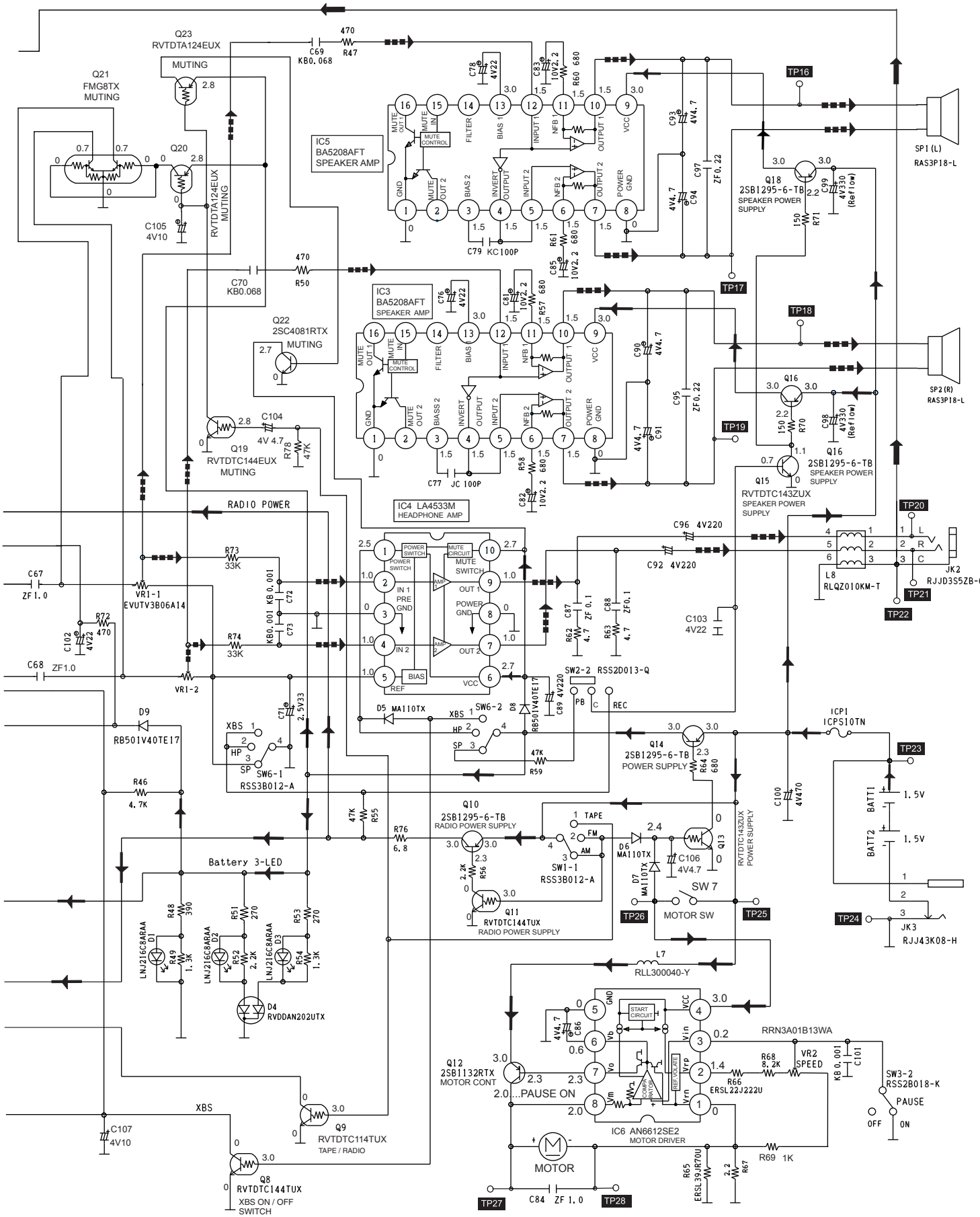


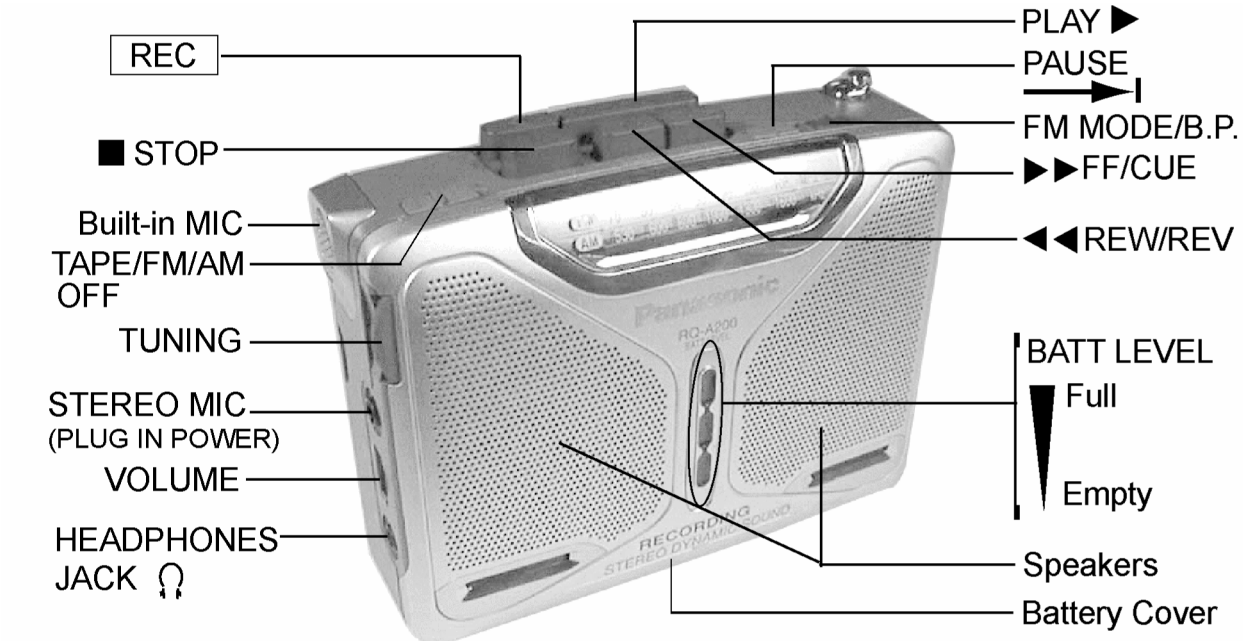
2SK303V3TB

■ SCHEMATIC DIAGRAM-1



SCHEMATIC DIAGRAM-2




REC
■ STOP
Built-in MIC
TAPE/FM/AM
OFF
TUNING
STEREO MIC
(PLUG IN POWER)
VOLUME
HEADPHONES
JACK
PLAY ▶
PAUSE
FM MODE/B.P.
▶▶FF/CUE
◀◀REW/REV
BATT LEVEL
Full
Empty
Speakers
Battery Cover

Hand Strap
Link
Speaker
XBS
DC IN 3V
Panasonic
Cassette Cover